WE CLAIM:

1. An illuminating-light controller comprising:

a micro mirror type spatial light modulator for projecting light, emitted from a light source, on a corresponding area by tilting a reflecting surface;

a first light source for emitting a first light which is projected on said corresponding area by illuminating said first light to said reflecting surface of said spatial light modulator tilted at a first angle;

a second light source for emitting a second light which is projected on said corresponding area by illuminating said second light to said reflecting surface of said spatial light modulator tilted at a second angle; and

a control section for controlling said first light emitted from said first light source and said second light emitted from said second light source.

2. The illuminating-light controller according to Claim 1, wherein said control section controls said first and second light sources so that they are alternately driven to emit light.

3. The illuminating-light controller according to Claim 2, further comprising:

a first polarizing optics, provided in an optical path along which the light emitted from said first light source reaches said reflecting surface of said spatial light modulator, for polarizing said light in a specific direction; and

a second polarizing optics, provided in an optical path along which the light emitted

from said second light source reaches said reflecting surface of said spatial light modulator, for polarizing said light in a direction different from said specific direction.

4. The illuminating-light controller according to Claim 1, further comprising a failure detecting section for detecting failure of said first light source, wherein said control section drives said second light source to emit light if said failure detecting section detects the failure of said first light source.

5. The illuminating-light controller according to Claim 1, wherein said spatial light modulator is a digital micro mirror device.

6. A projector comprising:

a first light source for emitting light in pulse form;

a second light source for emitting light in pulse form, said first light source and said second light source being switched alternately;

a spatial light modulator equipped with a micro mirror tiltable at a first angle and a second angle, light modulation being performed by tilting said micro mirror;

a projection lens on which the light reflected by said micro mirror of said spatial light modulator is incident; and

a control section for controlling said first light source so that the light emitted from said first light source is modulated and directed to said projection lens with said micro mirror tilted at said first angle, and for controlling said second light source so that the light emitted from said second light source is modulated and directed to said

projection lens with said micro mirror tilted at said second angle.

7. The projector according to Claim 6, wherein said first light source and said second light source are alternately driven to emit light during a sub-field provided for each color in a frame forming a specific image.

8. A projector comprising:
a first light source;
a second light source provided separately from said first light source;
a detection section for detecting an abnormal state of said first light source;
a spatial light modulator equipped with a micro mirror tiltable at a first angle and a second angle, light modulation being performed by tilting said micro mirror; and
a projection lens on which the light reflected by said micro mirror tilted at said first angle or said second angle is incident;
wherein said spatial light modulator directs light, emitted from said first light source, to said projection lens with said micro mirror tilted at said first angle, and, in the case that an abnormal state of said first light source is detected by said detection section, also directs light, emitted from said second light source, to said projection lens with said micro mirror tilted at said second angle.

9. An illuminating-light controller comprising:

a light modulator for projecting light on a corresponding area by tilting a reflecting surface;

a first light source for emitting a first light which is projected on said corresponding area by illuminating said first light to said reflecting surface of said spatial light modulator tilted at a first angle;

a second light source for emitting a second light which is projected on said corresponding area by illuminating said second light to said reflecting surface of said spatial light modulator tilted at a second angle; and

a control section for controlling said first light emitted from said first light source and said second light emitted from said second light source.

10. The illuminating-light controller according to claim 9, wherein said light modulator is of the spatial light modulator type.

11. The illuminating-light controller according to claim 9, wherein said light modulator is equipped with a tiltable micro mirror device.

12. An illuminating-light controller comprising:

a light modulator for projecting light on a corresponding area by tilting a reflecting surface;

a plurality of light sources for emitting light which are projected on said corresponding area by illuminating said light from each of said plurality of light sources to said reflecting surface of said light modulator;

said reflecting surface is tilt able to a plurality of angles, each angle corresponding to the projection of light from one of said plurality of light sources; and

a control section for controlling said plurality of light sources.

13. A method for directing a first illuminating light from a first light source and directing a second illuminating light from a second light source, to a projection lens by tilting a

micro mirror of a spatial light modulator to reflect said first illuminating light and said second illuminating light at said micro mirror, said method comprising the steps of:

directing said first illuminating light to said projection lens by tilting said micro mirror at a first angle to reflect said first illuminating light at said micro mirror; and

directing said second illuminating light to said projection lens by tilting said micro mirror at a second angle to reflect said second illuminating light at said micro mirror.

14. The method according to Claim 13, further comprises the steps of alternately switching on said first light source and said second light source so that each light source emits light in pulse form.

15. The method according to Claim 13, further comprises the steps of only switching on said first light source and keeping said second light source on standby; and

switching on said second light source if an abnormal state of said first light source is detected.

16. A method for directing light with three primary colors to a projection lens by employing a spatial light modulator which has a first state in which a micro mirror is tilted at a first angle and a second state in which said micro mirror is tilted at a second angle, said method comprising the steps of:

constructing three color fields for each frame forming an image by said light with three primary colors; and

directing light, modulated by employing said first state of said spatial light modulator, and light, modulated by employing said second state of said spatial light modulator, to

said projection lens for each of said three-color fields.

17. The method according to Claim 16, further comprises the steps of having:

light modulation employing said first state during the time said micro mirror is tilted at said first angle; and

having light modulation employing said second state during the time said micro mirror is tilted at said second angle.

18. The method according to Claim 16, further comprises the steps of differentiating the incidence angles of said light with three primary colors on said spatial light modulator between the case of the light modulation employing said first state and the light modulation employing said second state.

19. The method according to Claim 16, further comprises the steps of employing the light modulation of said second state in an inverted relationship from the ON/OFF light modulation of said first state.